

meridian; and it is probable that, in the earlier measurements, no peculiar precautions were adopted on that account."

The catalogue then follows, and consists of 627 entries (many of these relate to the same star), containing the name of the star, Struve's number, the approximate right ascension and north polar distance for 1840, the angle of position and distance, with the number of observations, the weight of the result, and the magnifying powers employed. Finally, are set down the magnitudes of the component stars and the epoch at which the measures were made.

On the Longitude and Latitude of the Observatory, George Town College, near Washington, and the Situation of some Leading Points in that City. By Mr. Curley.

"The latitude of our Observatory is deduced from 7 observations of *Polaris* above and below pole, 7 observations of α *Ursæ Majoris* above and below pole, 7 observations of λ *Ursæ Minoris*, using the *Nautical Almanac* declination, and 180 observations of other stars. The mean of these accordant observations gives the latitude of George-Town College Observatory $38^{\circ} 54' 26''$ North.

"The instrument with which the observations were made is a meridian transit circle by Simms, with a divided circle of 45 inches diameter, read off by four microscopes. The telescope is of 5 feet focus and 4 inches aperture. The nadir point was found by viewing the wires reflected from a surface of mercury.

"The longitude from Greenwich is deduced from four corresponding lunar transits made at Greenwich and George Town, with all the seven wires. The Astronomer Royal very kindly sent the observations immediately on request. There were more corresponding observations, but as some of the wires were wanting, and as the mean of seven wires from imperfect transits generally differs from the mean of seven wires observed, the perfect observations alone were employed. The transit instrument is by Ertel of Munich. The object-glass has a focal length of 6 feet, and the aperture is of 4.6 inches. The clock is a good one, by Molyneux of London.

"The computation was performed nearly in the manner recommended by Mr. Baily. Having got a good approximation to the longitude of George Town, the increase of the moon's right ascension between the two meridians was divided by the moon's hourly motion computed for the mean of the Greenwich times of observation. The result is, that the George-Town College Observatory is $5^{\text{h}} 8^{\text{m}} 18^{\text{s}}.2$ West of Greenwich."

By a base of 957 feet, measured along the aqueduct leading the Chesapeake and Ohio Canal across the Potowmac, and a Munich universal instrument, which reads off horizontal angles to $10''$, Mr. Curley found the distance between the National Observatory and the George-Town Observatory to be 8764.4 feet.

The direction of the National Observatory from the George-Town Observatory was observed to be $56^{\circ} 44' 40''$ to the East of South. Hence, after allowing for the distance of the domes from the points of observation, the dome of the National Observatory is $47^{\circ} 4$ South and $6^{\circ} 2$ East of the dome of George-Town College Observatory.

From Mr. Kluskey, City Surveyor of Washington, the following differences of latitude and departure between the dome of the Capitol and the National Observatory were obtained, viz.—

Capitol Dome 1906 feet S., and 12158.8 feet E. of the National Observatory.

Adopting the position of George-Town Observatory, given above, Mr. Curley finds the following latitudes and longitudes :—

	North Lat.	West Long.
	^o ' "	^h ^m ^s
George-Town College, Dome	38 54 26.0	5 8 18.20
National Observatory, Dome	53 38.58	12.00
Capitol — Dome	53 19.87	1.74
Old Naval Observatory, Lieut. Gilliss' Station	38 53 31.61	5 8 1.83

i. e. following Lieut. Gilliss' statement, that it was 1200 feet N.W. 5° from the Capitol Dome.

Mr. Curley adds that the substance of the above account is taken from a MS. written two or three years ago, which contains a description of the instruments and some observations. Circumstances have not permitted him to get the MS. printed.

On the Numerical Computation of the Values of Slowly-converging Series. By Sir J. Lubbock, Bart. F.R.S. &c.

The numerical values of series which are incapable of direct summation, and which slowly converge, are sometimes required, as, for example, the quantities called *b* in the *Méc. Cél.*, which are so important in astronomy and so troublesome to compute.

Suppose the slowly converging series,

$$1 + x + x^2 + x^3 + \&c.$$

of which the Napierian logarithm is

$$x + \frac{x^2}{2} + \frac{x^3}{3} + \frac{x^4}{4} + \&c.$$

the series which expresses the Napierian logarithm evidently converges more rapidly than that which expresses the corresponding natural number; and as this is the case in other similar instances, it is desirable, especially with a view to tabulating numerical values, corresponding to different values of the variable, to have a ready mode of obtaining the numerical values of the coefficients in the series which expresses the logarithm of any series of this kind.